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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/718,397	11/19/2003	Steve J. Lofland	42P15277	9724
8791	7590	12/15/2005	EXAMINER	
BLAKELY SOKOLOFF TAYLOR & ZAFMAN 12400 WILSHIRE BOULEVARD SEVENTH FLOOR LOS ANGELES, CA 90025-1030			LEO, LEONARD R	
			ART UNIT	PAPER NUMBER
			3753	

DATE MAILED: 12/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/718,397

Applicant(s)

LOFLAND ET AL.

Examiner

Leonard R. Leo

Art Unit

3753

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 September 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6, 10-15 and 19-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6, 10-15 and 19-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

The amendment filed on September 26, 2005 has been entered. Claims 7-9, 16-18 and 27-31 are cancelled, and claims 1-6, 10-15 and 19-26 are pending.

#### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2 and 10-11 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Vandergrift. Regarding claim 1, the recitation of “for cooling an electronic component” is considered to be a statement of intended use, even if claimed, does not merit patentable weight unless the body of the claim refers back to, is defined by, or otherwise draws life and breadth from such intended use. *Ex parte Masham*, 2 USPQ2d 1647 (1987). First member 1 having semi-circular channel walls 3, 4 is interlaced with semi-circular channel walls 5, 7 of the second member.

#### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3-5, 12-14 and 21-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vandergrift in view of Bronander.

Vandergrift discloses all the claimed limitations except symmetrical flow paths.

Bronander discloses a heat exchanger comprising a first member 27 and second member 28 defining a plurality of symmetrical, non-linear flow paths for the purpose of providing uniform heat exchange.

Since Vandergrift and Bronander are both from the same field of endeavor and/or analogous art, the purpose disclosed by Bronander would have been recognized in the pertinent art of Vandergrift.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Vandergrift a symmetrical, non-linear flow paths for the purpose of providing uniform heat exchange as recognized by Bronander.

Regarding claims 5, 14 and 23, it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from a prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987). Therefore, the "inlet" at the center of the members is structurally met by Bronander.

Claims 6, 15 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vandergrift in view of Fraas et al.

The device of Vandergrift lacks tapered channel walls.

Fraas et al discloses tapered fins/ribs make more efficient use of material than fins/ribs of uniform thickness.

Since Vandergrift and Fraas et al are both from the same field of endeavor and/or analogous art, the purpose disclosed by Fraas et al would have been recognized in the pertinent art of Vandergrift.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Vandergrift tapered fins/ribs for the purpose of making efficient use of material as recognized by Fraas et al.

Claims 19-20 and 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vandergrift in view of Miyata et al.

The device of Vandergrift lacks a combination with an electronic component.

Miyata et al discloses a system comprising a wafer 5 mounted on support 16 including a heat exchanger 40 (Figure 6) for the purpose of controlling the temperature of the wafer.

Since Vandergrift and Miyata et al are both from the same field of endeavor and/or analogous art, the purpose disclosed by Miyata et al would have been recognized in the pertinent art of Vandergrift.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ the device of Vandergrift in combination with a wafer for the purpose of controlling the temperature thereof as recognized by Miyata et al. Note the very similar structure of Miyata et al in Figure 6 and Vandergrift.

Regarding claims 25-26, Miyata et al discloses refrigerator 49 coupled by tubing 46b, 47a with pumps 45a, 45b. Inherently, a fan provides cooling to the refrigerator on the heat rejection side of the process.

*Response to Arguments*

The anticipatory rejections in view of Coe, Tomchak, Kawakatsu et al, Rhodes et al and Mok et al are withdrawn in view of the claim amendment.

Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

The Examiner regrets providing little or no supporting analysis to the anticipatory rejections. It is believed applicant is of ordinary skill in the art and capable of reading the prior art and matching the limitations set forth in the claims. Should applicant have any further questions regarding the interpretation of the claims, the Examiner would be readily available.

With respect to Fraas, the date of 1965 is provided in the previous PTO-892 as shown below. The single page of disclosure is believed sufficient for one of ordinary skill in the art to comprehend and appreciate. As such, there is no argument that Fraas does not teach or suggest what the Examiner proposes in the grounds of rejection.

Fraas et al, "Heat Exchanger Design," 1965, John Wiley and Sons, page 33.

No further comments are deemed necessary at this time.

*Conclusion*

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO**

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MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leonard R. Leo whose telephone number is (571) 272-4916. The examiner can normally be reached on Monday thru Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gene Mancene can be reached on (571) 272-4930. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.



LEONARD R. LEO  
PRIMARY EXAMINER  
ART UNIT 3753

December 12, 2005